Chapter Four

Security-Related Assistance and the Longer-Term Foundations of Peace: Arms Control and Peace Funds

Much of the current debate over U.S. foreign aid focuses on ways to address specific international problems or conflicts once they have become acute crises. But the United States might also consider it wise to provide more resources for preventive arms control and means of avoiding conflict--especially if there are promising ways to do so that might reduce the likelihood of future crises and wars.

U.S. policymakers might thus decide to improve nuclear and chemical arms control where possible, and help defuse regional tensions by assisting in measures to build confidence that military attacks are not imminent. The United States might also consider offering funds to help certain countries move beyond conflict to more peaceful stages in their relations with each other. The United States provided such "peace funds" during and after the 1970s negotiations process between Israel and Egypt that culminated in the Camp David Accords. A number of donors including the United States are now holding out the prospect of similar help to the Palestine Liberation Organization (PLO) in light of its mutual recognition with Israel. Although such aid is not appropriate in all situations and cannot substitute for a genuine desire for peace on the part of adversaries, it might help induce leaders in some of the world's hot spots to take difficult steps toward resolving conflicts. By providing tangible economic benefits, it also can help such leaders show their populations the rewards of peace.[1] If successful in reducing the chances of war, peace funds can in turn lessen the chance of future threats to U.S. security interests.

The annual costs to the United States of assisting with new international arms control measures are likely to be relatively modest when compared with the costs of maintaining armed forces--perhaps a few hundred million dollars. A peace fund that provided aid to a few selected nations might involve added funding approximating a billion dollars a year, or perhaps somewhat more.

Promoting Effective Arms Control

The potential benefits of further arms control efforts are considerable. Stemming the proliferation of nuclear weapons, for example, can reduce the chance that nuclear weapons will wind up in the hands of rogue leaders or terrorists. Eliminating chemical weapons could lower casualties should U.S. troops become actively involved in hostilities.

Nuclear Nonproliferation

The international agency most directly responsible for deterring nuclear proliferation is the International Atomic Energy Agency (IAEA). In 1993, its total annual budget was some $200 million. Of this amount, about $65 million was devoted to "safeguards"--that is, to monitoring nuclear reactors and fuel fabrication or storage facilities to ensure

1. For another discussion of the concept of peace funds, see John W. Sewell and Peter M. Storm, *Challenges and Priorities in the 1990s: An Alternative U.S. International Affairs Budget, FY 1993* (Washington, D.C.: Overseas Development Council, 1992), pp. 31-33.

Table 10.
Number of Nuclear Sites Under IAEA Safeguards or Containing Safeguarded Material on December 31, 1991

Site	Number of Sites
Power Reactors	155
Research Reactors and Critical Assemblies	158
Conversion Plants	9
Fuel Fabrication Plants	44
Reprocessing Plants	5
Enrichment Plants	7
Separate Storage Facilities	45
Other Facilities	357
Total	780

SOURCE: Congressional Budget Office using data from International Atomic Energy Agency, *The Annual Report for 1991* (Vienna, Austria: IAEA, 1992), p. 124.

that materials were not diverted from their proper purposes. The monitoring activities involve three main procedures: placing tags and seals on the fuel associated with nuclear reactors; carrying out periodic inspections--perhaps two or three per major site each year--to ensure that tagged and sealed materials were not tampered with when inspectors were absent; and sampling materials so that they can be subjected to laboratory analysis by the IAEA, to confirm that no nuclear materials have been extracted.

In 1991, for example, nearly 800 sites were under IAEA safeguards, and more than 2,000 inspections conducted (see Tables 10 and 11). Nearly 60 countries having "significant nuclear activities" were under safeguards, as well as another 50 or so countries with more modest nuclear research and energy operations.[2]

2. International Atomic Energy Agency, *The Annual Report for 1991* (Vienna, Austria: IAEA, 1992), pp. 111-113.

IAEA inspections represent an important means of deterring the manufacture of nuclear weapons. In the event that this deterrence fails, they can provide timely warning that a country may be embarking on a nuclear weapons program--especially when used in conjunction with the national intelligence communities of member states.

Improving Inspections. IAEA inspections could be improved in various ways. Increasing the quality of controls at sites already monitored by the IAEA is one such approach that has been discussed by the agency's director, Hans Blix. In particular, the IAEA could expand and tighten its measurement activities, reducing the amount of fissile material that could otherwise "slip through the cracks" of its measurement procedures without being noticed. As a result, its confidence that materials were not being

Table 11.
Verification Activities Under International Atomic Energy Agency Safeguard Agreements, 1991

Activity	Number of Activities
Inspections Performed	2,145
Individual Working Days Devoted to Inspection	9,442
Seals Applied to Nuclear Material or Agency Safeguards Equipment Detached and Subsequently Verified (Including seals applied jointly with a group of states)	24,300
Surveillance Films Reviewed	3,300
Video Tapes Reviewed	1,065
Plutonium and Uranium Samples Analyzed	1,090
Analytic Results Reported	2,830

SOURCE: Congressional Budget Office using data from International Atomic Energy Agency, *The Annual Report for 1991* (Vienna, Austria: IAEA, 1992), p. 123.

diverted might increase--for a relatively modest cost.[3]

The IAEA could also increase its ability to monitor--and, it is hoped, deter--nuclear nonproliferation by expanding its inspections to a broader array of sites. It has attempted to do so recently in the difficult and well-known case of North Korea. For example, it might increase the types of nuclear materials subject to inspection and perhaps even inspect certain dual-use nonnuclear equipment.[4] Currently, inspections focus primarily on nuclear material in fuel form. Such stipulations could be extended to signatories to the Nuclear Non-Proliferation Treaty (NPT) and nonsignatories alike. For the latter, such a broader range of inspection requirements would become the new precondition for importing nuclear-related technologies.

Can the IAEA really improve its effectiveness in the event that countries are determined to acquire nuclear weapons? Recent efforts to expand IAEA activities in North Korea may not be improving the efficacy of nonproliferation efforts. It is unclear whether nonnuclear countries will accept more rigorous inspections. They are often irritated by what they see as heavy-handed and self-serving behavior on the part of states with nuclear weapons and may not choose to grant them greater powers to perpetuate what is sometimes seen as an inherently discriminatory Nuclear Non-Proliferation Treaty. Some may simply want nuclear weapons.

In addition, tightening export controls is possible only if suppliers are willing to make a stricter cartel arrangement work. Moreover, in these cases the United States would need to balance its desire to stanch proliferation with its wish not to allow embarrassment or penalty to friends such as Israel that may have nuclear weapons but are not recognized as nuclear powers by the NPT. Such considerations may, for example, call into doubt any unrestricted use of challenge inspections.

Estimating Costs. If broader IAEA inspection procedures can be put in place, though, what might they cost? It is difficult to know without a detailed analysis that goes beyond the scope of this study. But some rough estimates can be made. Assume that thousands of additional sites might be added to the IAEA's inspection rolls in this way. If each one was visited once a year on average, costs for conducting such a broader array of inspections probably would add several tens of millions of dollars to the current IAEA safeguards budget.

In addition, signatories to the NPT as well as nonsignatories could be made subject to challenge inspections of sites suspected of harboring illicit activity. Under this approach, if the IAEA--perhaps acting on tips from a national intelligence source--believed that undisclosed facilities harbored prohibited activity, it could request prompt access to them. Although countries could always refuse access to any facilities that were discovered, as North Korea has recently done, they might then lose the legal right to purchase dual-use technologies in certain cases. Such sanctions could harm not only the nuclear sectors but the general economies of countries against which they were applied. In several existing arms control treaties, the costs to inspect sites suspected of harboring illicit activity can constitute up to 25 percent of total costs; comparable results could be expected for the IAEA.[5]

More inspections would also produce more data to manage and analyze. Hiring more analysts and inspectors and upgrading computer support could cost the United States modest additional sums in its own intelligence budget. But these costs would probably be small, since many of the functions could be carried out by existing intelligence officers

3. "Interview with IAEA Director Hans Blix: Keeping an Eye on a Nuclear World," *Arms Control Today* (November 1991), pp. 3-6; Statement of Daniel Horner, on behalf of the Nuclear Control Institute and the Committee to Bridge the Gap, before the Senate Committee on Energy and Natural Resources, August 5, 1993.

4. J. Jennekens, R. Parsick, and A. von Baeckmann, "Strengthening the International Safeguards System," *IAEA Bulletin*, vol. 34, no. 1 (1992), p. 9.

5. For estimates of the costs of arms control monitoring, see Congressional Budget Office, *U.S. Costs of Verification and Compliance Under Pending Arms Treaties* (September 1990), pp. 28-42; Jeffrey H. Grotte and Julia L. Klare, *Balancing Cost and Effectiveness in Arms Control Monitoring* (Alexandria, Va.: Institute for Defense Analyses, 1992), pp. III-27 through III-30, IV-2.

Table 12.
U.S. Costs of Illustrative Aid Initiative for Arms Control (In millions of 1994 dollars)

Category of Aid	Average Annual Increases
Arms Control	
Inspecting nuclear sites and carrying out other IAEA monitoring	Up to 50
Monitoring and assisting in compliance with Chemical Weapons Convention	Up to a few hundred
Confidence-building measures	Several tens
Peace Funds	
Conflict zones	Up to a few hundred
Other regions	Up to a few hundred
Total	Up to 2,000

SOURCE: Congressional Budget Office.

NOTE: IAEA = International Atomic Energy Agency.

in the member countries.[6] Indeed, in some cases having better IAEA data might simplify the ongoing task of monitoring proliferation trends.

The added IAEA costs discussed in this section should be rather modest in comparison with other policy changes discussed in this study. Even if the United States made a disproportionately large contribution, its additional payments probably would not exceed $50 million a year (see Table 12).

6. Patricia Bliss McFate and others, *Constraining Proliferation: The Contribution of Verification Synergies* (Ottawa: Department of External Affairs and International Trade Canada, 1993), p. 17.

The Chemical Weapons Convention

Chemical weapons are relatively cheap and simple technologically, which makes them appealing to many smaller or less advanced powers. But using chemical weapons can be devastating to unprepared troops or civilians; even the threat of use can have important psychological and political effects.

Fortunately, these weapons will be largely eliminated over the next 10 years or so. Most countries are expected to sign and ratify the Chemical Weapons Convention (CWC) in the next several years, the only major set of possible holdouts being Israel and the Arab countries. The CWC calls for eliminating all chemical weapons within a decade of the date on which it will become legally binding, probably in 1995 (though in certain special cases, countries may be granted an extra five years to come into full treaty compliance).[7]

Given the many sites to inspect, the CWC will be relatively expensive as arms control treaties go. The inspection scheme is challenging because of the large number of legitimate chemical-related factories that could be inspected--estimated to number as many as 1,000 or more worldwide--the various classes of facilities, and the need to protect proprietary rights during inspections.[8] The United States is expected to pay perhaps $200 million a year over the first 15 years of the treaty, including 25 percent of the central inspection office's budget.

Other costs related to destroying chemical weapons are considerably larger. According to estimates, the United States, which has a sizable fraction of the world's supply of chemical weapons, may spend up to $8 billion to eliminate its own stockpiles through automated processes involving the separa-

7. Charles C. Flowerree, "The Chemical Weapons Convention: A Milestone in International Security," *Arms Control Today* (October 1992), p. 6.

8. Grotte and Klare, *Balancing Cost and Effectiveness in Arms Control Monitoring*, pp. III-26 through III-27; Michael Krepon, "Verifying the Chemical Weapons Convention," *Arms Control Today* (October 1992), pp. 19-24.

tion of weapons components and incineration.[9] But these stocks were slated for destruction well before the CWC became a near-term likelihood and are being eliminated first and foremost for safety reasons. Thus, these are not truly treaty-related costs.

Private firms that will wish to protect proprietary information when inspected are likely to experience some disruptions and costs. But the Chemical Manufacturers' Association believes that these costs will be modest. They will be incurred not by the government but by firms.[10]

None of the above expenditures represent foreign aid as it is defined in this study. Most of the costs will be incurred on U.S. soil, and the remainder will be the obligatory results of arms control that the United States has chosen to pursue for its own national purposes.

However, in addition to these treaty-mandated costs, the United States may also elect--voluntarily--to help other countries destroy their stockpiles of chemical weapons. It has already begun to help Russia do so, as discussed in Chapter 2, and it could expand assistance to other countries in the future.

With a number of years' experience in developing technologies to destroy chemical weapons, the United States is gaining considerable technological expertise in this difficult area. Given their interest in expediting elimination of all chemical weapons, U.S. policymakers may decide that contributing money to these activities would enhance national security.

It is impossible to calculate the precise costs of destroying chemical weapons without detailed information about the stocks and characteristics of those weapons as well as the techniques that would be used to destroy them. Costs could be considerably lower in other countries than in the United States. To begin with, other countries' combined chemical weapons inventories are substantially smaller than U.S. holdings.[11] In addition, depending on the necessary scale of operations and the strictness of environmental standards, simpler approaches to destroying weapons could be used in some cases. (Much of the destruction of Iraq's chemical arsenal, for example, is being conducted by simply blowing up chemicals in remote locations.) In situations in which advanced technologies may be preferred, other countries may be able to benefit from those the United States has already developed, thereby avoiding research and development costs.

Still, the chemical weapons holdings of other countries are substantial, and they are dispersed throughout a number of geographic areas. They vary in type and in state of repair. Even if eliminating their stocks cost less than the $8 billion that the United States plans to spend to destroy its own stockpiles, the process would not be cheap. Billions of dollars in total expenditures would probably be involved. Any U.S. decision to help other countries (besides Russia) in this process therefore could cost as much as a few hundred million dollars a year.

Confidence-Building Measures

The United States may also promote steps to defuse risks in theaters characterized by tension and the close proximity of potentially adversarial military forces. These measures, some of which might be undertaken without U.N. involvement, include aerial reconnaissance, military "hotlines" for rapid and reliable communications, early-warning radars, and simple monitoring technologies. Such measures can help assure countries that they are not going to be attacked by their adversaries--reducing the chances that fear of surprise attack or low-level skirmishing might contribute to an outbreak of war.

Once again, precise costs are hard to project at this stage since no specific treaty proposals are available for consideration. But the Open Skies Treaty,

9. General Accounting Office, *Chemical Weapons Destruction: Issues Affecting Program Cost, Schedule, and Performance* (January 1993).

10. Grotte and Klare, *Balancing Cost and Effectiveness in Arms Control Monitoring*, p. III-27.

11. Paul Doty, "The Challenge of Destroying Chemical Weapons," *Arms Control Today* (October 1992), p. 25.

involving most of the countries of North America and Europe, is likely to cost the United States several tens of millions of dollars a year on average. Helping several other countries with confidence-building initiatives might require comparable funding levels.

The Concept of Peace Funds

A strong argument also exists for contributing substantial sums of money to countries that have entered into politically courageous and difficult accords with former adversaries. The United States has already chosen to provide large amounts of bilateral aid of this type to Egypt and Israel, as an outgrowth of the 1970s peace process that culminated in the 1979 Camp David Accords normalizing relations between those countries. Such funds can help governments that must often take considerable political risks to choose peace over war shore up their popular support at home through better economic conditions and opportunities.

Clearly, applying this approach across the board would be inappropriate. Warring parties should not come to take U.S. aid for granted and insist upon it before entering into peace accords. Moreover, some groups--the Khmer Rouge, the Shining Path, Andean drug lords, and governments like those of Iraq, Sudan, and North Korea--may simply be seen as unworthy of assistance or untrustworthy in terms of how they would use it. Finally, such funds can be temptations to corruption in some countries, and in those cases might best be given only if tied to certain projects or programs. But the concept of untied assistance--perhaps dubbed peace accounts or peace funds, as suggested by the Overseas Development Council for the Mideast region in particular--might well be usefully extended beyond Israel and Egypt.[12]

12. Sewell and Storm, *Challenges and Priorities in the 1990s*, pp. 31-33.

War Injuries and Damages

About 10 countries--including Cambodia, Afghanistan, Somalia, Ethiopia, Angola, Mozambique, El Salvador, and Nicaragua--were recently ravaged by wars that in some cases were exacerbated by the superpower rivalry. In such cases, the United States might arguably have a particular humanitarian interest in the future well-being of those countries. Concerns may be heightened because Russia is in no position to assist those countries, except perhaps by forgiving their debts. Beyond humanitarian motives, helping these countries now could reduce the future likelihood of a more difficult and costly relief operation--and perhaps a future U.N. military intervention in a place such as Angola, Afghanistan, or elsewhere.

These countries would already receive help under various initiatives discussed elsewhere in this study--through U.N. peacekeeping when necessary, as well as through programs in primary health care, nutrition, education, and agriculture that the United States would be supporting globally. But the United States might also elect to help these countries by meeting special war-related needs they may have, such as medical care and mine clearing. It also may provide assistance with their roads, bridges, and other infrastructure to repair and stimulate their economies. Because of the link between such initiatives and conflict resolution, funding for them is placed under this study's general category of peace funds.

Most of the countries in special need of such services have small populations and gross domestic product. Some of them are already on the way to recovery. But because of the damage they have suffered, the costs to help them could be significant, as pointed out by National Security Advisor Anthony Lake and coauthors in a 1990 book.[13]

13. Anthony Lake and others, *After the Wars* (Washington, D.C.: Overseas Development Council, 1990), pp. 14-41; see also John Burgess, "U.N. Urges Revision of Somali Aid: $167 Million Sought for Reconstruction," *The Washington Post*, March 11, 1993, p. A25.

Although Lake and his colleagues did not present detailed budgetary estimates for all of the countries they examined, they did suggest that the larger of those countries--in particular, Sudan and Ethiopia--might each be able to absorb as much as another billion dollars a year in aid if and when political conditions are appropriate. Assuming that some of the smaller countries would require less and that other donors would contribute aid as well, U.S. contributions to all of the countries mentioned above might reach a billion dollars a year. More realistically, since some of those states are unlikely in the next decade to resolve internal conflicts and adopt the types of policies that make aid appropriate, actual U.S. contributions might be half as great.

Additional foreign assistance aimed at repairing war damage would, of course, be subject to the limitations associated with all project-related aid. The aid can be misdirected or misused and so fail to accomplish its goals. Thus, any decisions to forge what would amount to mini-Marshall Plan packages for these countries would require seriousness of purpose on the part of recipient governments as well as strong institutions capable of productively using large amounts of aid.

Regional Conflicts Elsewhere

Also worthy of attention are certain other areas where peace-fund dollars might reduce the chance of serious conflicts that could in some way involve the United States. Chief candidates may include new participants in Mideast peace agreements. Perhaps Jordan, Lebanon, and even Syria could be included should they join their neighbors and sign a comprehensive peace accord with Israel. Other candidates for future consideration could be India and Pakistan, perhaps to give them incentives to find a solution to the problem of Kashmir.[14]

The United States might hold out the hope of a peace fund as a way to provide political momentum to regional leaders willing to take the courageous step of making peace in these areas. How much might that cost? If the diplomatic engagement of the United States plays a key role in solving one of the world's major regional conflicts and perhaps a couple of smaller ones over the next decade, costs might be in the range of a few hundred million dollars a year--though this estimate is conjectural and very rough.

Sums on the order of $100 million a year can provide substantial leverage in addressing the problems of small countries. For example, after the September 1993 signing of the peace accord between the PLO and Israel, Western and Middle Eastern donors met to put together an aid package for the PLO. In loans, grants, and credits, the total value of the U.S. contribution to the roughly $2 billion package that resulted was $500 million over five years. An aid package of comparable size was discussed at an international conference on Somalia's political reconstruction in the fall of 1993.

The Palestinians living in the Israeli-occupied territories, however, number less than 2 million, and Somalis number only about 8 million. Aid to larger populations clearly would have to be greater in order to achieve comparable results. For larger countries--but excluding the special cases of Israel and Egypt--substantial U.S. economic aid in recent decades has sometimes reached into the range of hundreds of millions of dollars a year. This amount of funding would be politically significant for most larger developing countries and as such could carry considerable leverage in the pursuit of peace.

14. See John J. Schulz, "Riding the Nuclear Tiger: The Search for Security in South Asia," *Arms Control Today* (June 1993), p. 7.